

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 20

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HONG Y. SHEN, RUI R. ZENG,
YU P. ZHOU, GUI F. YU, CHENG H. HUANG,
ZHENG D. ZENG, WEN X. LIN and RUI F. WU

Appeal No. 97-3136
Application No. 08/312,780¹

ON BRIEF

Before ABRAMS, NASE, and CRAWFORD, Administrative Patent Judges.

NASE, Administrative Patent Judge.

¹ Application for patent filed September 27, 1994.

Appeal No. 97-3136
Application No. 08/312,780

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1 through 4 and 6 through 14, which are all of the claims pending in this application.²

We REVERSE.

² Claim 1 was amended subsequent to the final rejection.

BACKGROUND

The appellants' invention relates to a laser medical device. An understanding of the invention can be derived from a reading of exemplary claim 1, which appears in the appendix to the appellants' brief.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Ammann	4,165,469	Aug. 21, 1979
Berger et al. (Berger)	5,181,214	Jan. 19, 1993
Buys et al. (Buys)	5,336,217	Aug. 9, 1994

Claims 1 through 4 and 6 through 14 stand rejected under 35 U.S.C. § 103 as being unpatentable over Berger in view of Ammann and Buys.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejection, we make reference to the final rejection (Paper No. 8, mailed April 4, 1996) and the examiner's answer (Paper No. 16, mailed February 28, 1997) for the examiner's complete

reasoning in support of the rejection, and to the appellants' brief (Paper No. 15, filed November 22, 1996) and reply brief (Paper No. 18, filed April 28, 1997) for the appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. Upon evaluation of all the evidence before us, it is our conclusion that the evidence adduced by the examiner is insufficient to establish a prima facie case of obviousness with respect to the claims under appeal. Accordingly, we will not sustain the examiner's rejection of claims 1 through 4 and 6 through 14 under 35 U.S.C. § 103. Our reasoning for this determination follows.

In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. See In re Rijckaert, 9 F.3d 1531, 1532, 28

USPQ2d 1955, 1956 (Fed. Cir. 1993). The conclusion that the claimed subject matter is prima facie obvious must be supported by evidence, as shown by some objective teaching in the prior art or by knowledge generally available to one of ordinary skill in the art that would have led that individual to combine the relevant teachings of the references to arrive at the claimed invention. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Rejections based on § 103 must rest on a factual basis with these facts being interpreted without hindsight reconstruction of the invention from the prior art. The examiner may not, because of doubt that the invention is patentable, resort to speculation, unfounded assumption or hindsight reconstruction to supply deficiencies in the factual basis for the rejection. See In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 177 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968).

With this as background, we analyze the claimed subject matter and the prior art applied by the examiner in the rejection of the claims on appeal.

The claims on appeal³ recite a laser medical device comprising, inter alia, (1) a Nd:YAlO₃ laser crystal, (2) a pumping system for illuminating the laser crystal with pumping light and achieving population inversion of Nd³⁺ ion in the laser crystal, and (3) a resonant cavity for resonating light emitted from the Nd³⁺ ion to produce a beam of output laser light having a predetermined wavelength at the preset output power value. The claims on appeal further recite that the pumping system includes (1) a pumping light source for irradiating the pumping light on the laser crystal, (2) presetting means for setting in advance a value of output power of laser light adaptable to different medical treatment requirements, and (3) a power supply for providing the pumping light source with a suitable input power based on the output power value set by the presetting means.

³ See independent claims 1, 12, 13 and 14.

Berger discloses a temperature stable solid-state laser package. As shown in Figure 1, the laser package includes (1) a laser crystal (i.e., solid-state laser active material 25, typically in the form of a cylindrical rod), (2) a pumping system (i.e., laser diode 31), and (3) a resonant cavity (i.e., groove 21). Berger does not teach a Nd:YAlO₃ laser crystal or the pumping system including a presetting means for setting in advance a value of output power of laser light and a power supply for providing a pumping light source with a suitable input power based on the output power value set by the presetting means.

Ammann discloses a laser apparatus for producing a coherent light output at visible portions of the spectrum. As shown in Figure 1, the laser apparatus 10 includes a lasing medium such as Nd:YAlO₃ in a cavity defined by laser mirrors 12 and 13. Medium 11 is continuously pumped by a light source (not shown) which may consist of krypton-arc lamps. Ammann does not teach a pumping system having a presetting means for

setting in advance a value of output power of laser light and a power supply for providing a pumping light source with a suitable input power based on the output power value set by the presetting means.

Buy's discloses an apparatus for supplying laser radiation for the treatment of skin angiomas. As shown in Figure 14, the apparatus includes a laser source 51 for supplying laser radiation through flexible element 52 to the hand-piece 1. Buy's does not teach a Nd:YAlO₃ laser crystal or a pumping system which includes (1) a pumping light source for irradiating the pumping light on the laser crystal, (2) presetting means for setting in advance a value of output power of laser light adaptable to different medical treatment requirements, and (3) a power supply for providing the pumping light source with a suitable input power based on the output power value set by the presetting means.

The appellants argue (brief, pp. 17-23) that the claimed pumping system including the presetting means is not disclosed or suggested by the applied prior art. We agree. Specifically, the examiner relied upon the teachings of Buys (at columns 17 and 18) as suggesting the claimed pumping system. We do not agree. The automatic control unit disclosed by Buys is for measuring the power of the laser radiation emitted in order to control the shutter means 38 and the scanning means. Buys does not even disclose a pumping system for illuminating a laser crystal with pumping light. Thus, Buys automatic control unit does not include and would not have suggested (1) a pumping light source for irradiating the pumping light on the laser crystal, (2) a presetting means for setting in advance a value of output power of laser light adaptable to different medical treatment requirements, and (3) a power supply for providing the pumping light source with a suitable input power based on the output power value set by the presetting means.

Additionally, we note that the examiner in the rejection (final rejection, pp. 2-3) never treated the claimed limitation that the laser device includes "a Nd:YAlO₃ laser crystal." In that regard, Berger does not teach or suggest the use of a Nd:YAlO₃ laser crystal. Thus, the burden was on the examiner to set forth specific reasons why it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Berger's laser package to utilize a Nd:YAlO₃ laser crystal. This the examiner has not done. While the examiner did find that Ammann teaches a laser device with a Nd:YAlO₃ laser crystal, the examiner never determined that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Berger's laser package to utilize a Nd:YAlO₃ laser crystal as the laser material active medium as suggested by the teachings of Ammann.

For the reasons set forth above, the applied prior art would not have been suggestive of the claimed invention.

Accordingly, the decision of the examiner to reject claims 1 through 4 and 6 through 14 under 35 U.S.C. § 103 is reversed.

CONCLUSION

To summarize, the decision of the examiner to reject claims 1 through 4 and 6 through 14 under 35 U.S.C. § 103 is reversed.

REVERSED

NEAL E. ABRAMS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
JEFFREY V. NASE)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
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MURRIEL E. CRAWFORD)	
Administrative Patent Judge)	

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BIRCH, STEWART, KOLASCH & BIRCH, LLP
P.O. BOX 747
FALLS CHURCH, VA 22040-0747

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APPLICATION NO. 08/312,780

APJ NASE

APJ ABRAMS

APJ CRAWFORD

DECISION: **REVERSED**

Prepared By: Gloria Henderson

DRAFT TYPED: 13 Oct 98

FINAL TYPED: